Timelapse PlantCam®
User Guide

WINGSCAPES®

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WARNING! This product may contain lead, a chemical known to the state of California to cause cancer, birth defects and other reproductive harm.

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YouTube:	youtube.com/wingscapes
Blog:	wingscapes.typepad.com/wingscapes
Facebook:	facebook.com/Wingscapes
Twitter:	@wingscapes (or tweet with hashtags #birdcam or #plantcam)

WINGSCAPES®

Table of Contents

1. Welcome 4

2. Quick Start Guide 5

3. Definitions 6

4. Four Modes 8

5. Mounting Suggestions 12

6. Custom Settings & Converting Photos to Timelapse Video 14

7. Storage and Capacity 20

8. Image Viewing by TV Out Cable or USB Out Cable 21

9. Laser Aim 22

10. Specifications 23

11. Additional Information 24

1. WELCOME

This product allows you to accelerate time...to easily see things that are normally too slow to watch.

Wingscapes has designed this camera to be simple for beginning users, but also to be flexible enough to work in a variety of conditions. This is a new type of camera. Using it will require a little creativity, patience, and artfulness on the part of the user.

The easiest way to get started is to...get started. Refer to the following "Quick Start Guide" and begin experimenting with a simple setup. Custom settings allow you to optimize the camera for a variety of projects. Finding the correct combination of settings and camera placement for a given situation may require some experimentation and practice. At any time, you can reset the camera to its factory default settings in the SETUP menu.

Please take a moment to familiarize yourself with this guide and the basics of operating the camera. If at any time you need assistance or have questions about the camera's operation, please contact us via e-mail or phone.

2. QUICK START GUIDE

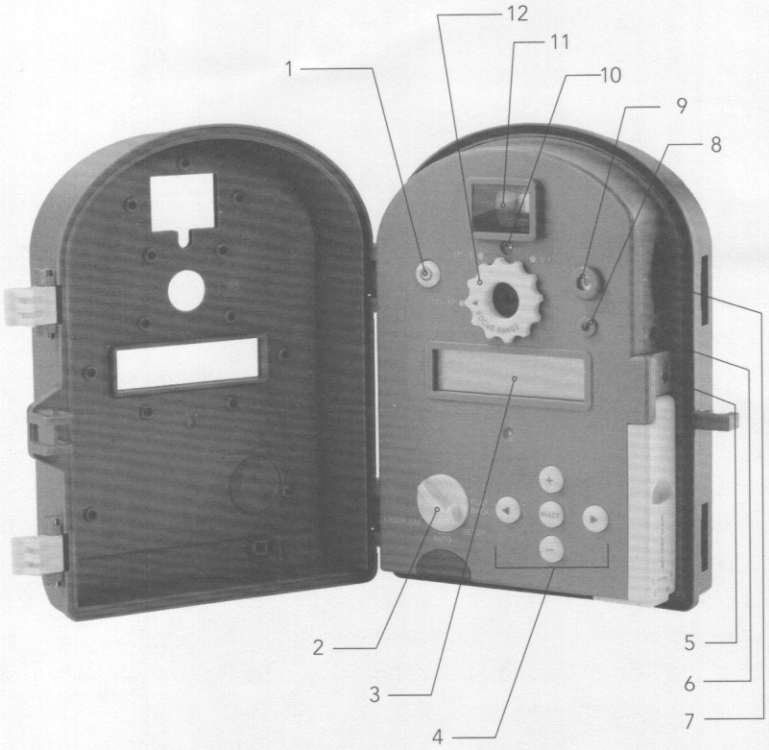
The following steps outline the quickest way to begin using your camera. We recommend that you scan the remainder of this user's guide before using your new camera.

1. Remove camera from packaging.
2. Insert four new AA batteries.
3. Mount the camera so that it is level and aimed at your target. Use viewfinder and laser to insure accurate aim. (Refer to the chapter on Mounting the PlantCam® for suggestions.)
4. Using the included tape measure, adjust the focus ring to match the distance between the camera and target.
5. Set the Rotary Dial to SETUP and press the Power/Status button to turn the camera ON.
6. Important: set the date and time before initial use.
7. Turn Rotary Dial to AUTO, close the door and secure the latches.

What Happens Then?

The camera will be in the AUTO Mode. After 10 seconds, the camera will take its first photo or video and then enter a standby mode and begin to count down a timelapse interval. At the end of each interval, the camera will wake-up, take a photo or video, show status for 10 seconds, and then begin to count down another interval. The camera will continue taking images until either the memory is depleted or the batteries are drained.

3. DEFINITIONS



1. Power/Status button — Turns the unit ON or OFF.

- To turn ON you must press and hold the Power/Status button until the LCD display activates.
- To turn OFF you must press and hold the Power/Status button until the LCD display goes off.
- To see the status of the camera, click the power button quickly (warning: if camera is within 15 seconds of taking its next photo or video, pressing this button will reset the timelapse timer)

2. Rotary Dial — Depending on the position of the dial, there are 4 possible functions: LASER AIM, AUTO, SETUP and PLAYBACK.

3. LCD Display

4. Function buttons

SELECT button

Used to confirm selections during SETUP and PLAYBACK modes.

+ or – button

- Used to change the setting values within the SETUP mode.
- Used to move forward or backward while reviewing pictures in PLAYBACK mode.

LEFT (◁) button

- Used to choose previous settings in SETUP mode.
- Used to delete pictures or video in PLAYBACK mode.

RIGHT (▷) button

- Used to choose next settings in SETUP mode.
- Used to play video clips in PLAYBACK mode.

5. USB OUT port — To plug USB cable to connect to a computer.

6. TV OUT port — To connect to TV to review pictures or video clips.

7. SD MEMORY CARD port — To insert SD card to increase memory capacity. Note: The metal contact of your card should be facing down when inserting.

8. Status/Standby Indicator — When the camera is in AUTO mode, it flashes every 3 seconds to indicate that the camera is powered ON. To see the status of the camera, click the power button quickly (note: if camera is within 15 seconds of taking its next photo or video, pressing this button will reset the timelapse timer).

9. LASER Aiming Device (read warnings)

10. Light Sensor — Measures available light and wakes up camera if "DAILY WAKEUP" setting is set to "BY LIGHT"

11. Viewfinder

12. Focus Range Setting

4. FOUR MODES

(change with Rotary Mode Switch)

SETUP

Turn the Rotary Dial to the SETUP position to change timelapse interval, convert photos to timelapse videos, and adjust other camera settings. Also use SETUP position when connecting camera to computer via USB cord. See detailed instructions for SETUP menu later in this guide.

AUTO

In the AUTO mode, the camera takes photos or videos according to the settings chosen in the SETUP menu. When the Rotary Mode Switch is turned to AUTO, the camera status is displayed for 10 seconds, then the first photo or video is captured, then the camera enters STANDBY mode (note: the display will turn off) and the LCD display goes off, and begins counting down its timelapse interval. The camera will wake up and counts down for 5 sec (Fig. 2) when it is ready to record a picture or video. Note: for timelapse interval 'ASAP', the camera will not go into STANDBY mode between shots (approx. 3-4 second delay between shots). For time lapse interval '30 seconds', the LCD display shows the status for 5 seconds only.

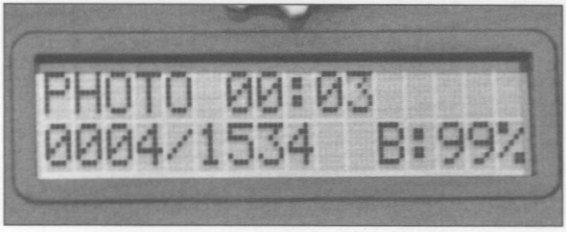


Fig. 2

When a picture or video is recording the LCD will show "CAPTURING" (Fig. 3).

Fig. 3

After capturing, the LCD display shows for 10 sec (Fig. 4).

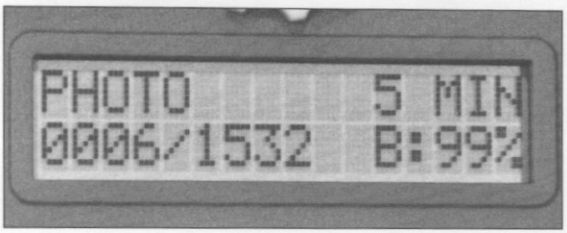


Fig. 4

Then the camera returns to STANDBY mode again. The red LED indicator will flash every 3 sec to indicate that the camera is powered ON, but is in a delay interval.

To display the camera status when it is in STANDBY mode, press the Power/Status button (Fig.1). It will not affect the delay interval unless the timer is within 15 seconds of the next event. If the button is pressed within 15 seconds of the end of a delay interval, the status will display and the interval will start over.

Memory Full

In the AUTO mode, if the LCD shows "MEM FULL!", it means that the memory is full. The camera will shut down automatically. Please clear the internal memory or insert an empty SD card.

Low Battery

In the AUTO mode, if the LCD shows "LOW BATTERY", it means that the battery is low. The camera will shut down automatically. Please replace the batteries.

PLAYBACK

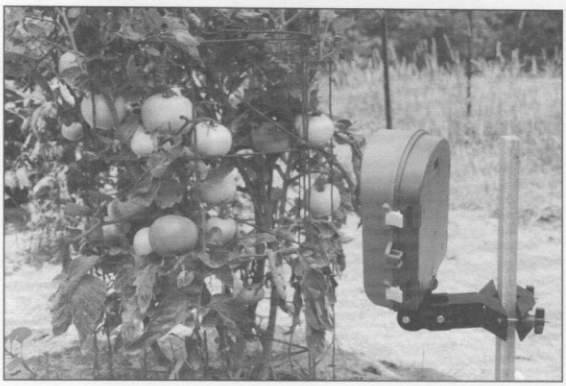
Use the PLAYBACK mode to view photos and video on a television. See detailed instructions for television viewing later in this guide.

LASER AIM

Use the Laser Aim function to aim the camera. IMPORTANT: NEVER look at the laser while it is activated and NEVER activate the laser when the camera is pointed towards another person. Read all warnings before using laser.

SPECIALTY MOUNTING BRACKET:

The specialty mounting bracket was designed to clamp to almost any pole, post, stake, or fence. If the rear clamping plate is removed from the bracket, the bracket can be mounted directly to any stable surface (eg – you can use wood screws to mount it to a wall). You can also thread the included strap through the rear of the mounting bracket to secure the bracket to a tree.



STRAP & STRETCH CORDS:

The included strap and stretch cords can be attached to the mounting points on the back of the camera and used to secure the camera directly to a tree.

6. CUSTOM SETTINGS & CONVERTING PHOTOS TO TIMELAPSE VIDEO

TURN POWER ON

Turn the rotary dial to the SETUP position. Press and hold the Power/ Status button. The SETUP MENU window will appear in the LCD display.

TURN POWER OFF

If you want to turn the unit off simply press and hold the Power/Status button again until the LCD display goes off. Note: in SETUP and PLAYBACK modes, if there is no activity for 2 minutes, the camera will automatically shut off to conserve battery life.

SETUP MENU

The setup menu will start with TIME LAPSE INTERVAL.

TIME LAPSE INTERVAL

Press + or – button to choose between 11 different settings: ASAP, 30 SEC, 1 MIN, 5 MIN, 10 MIN, 15 MIN, 30 MIN, 1 HOUR, 3 HOUR, 6 HOUR or 1 DAY. This determines the delay interval between each shot. (Note: Battery life will be diminished when using ASAP and 30 sec. intervals.) Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

PHOTO OR VIDEO?

Press + or – button to choose between PHOTO and VIDEO. Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

PHOTO QUALITY

Press + or – button to choose between three different resolutions: LOW, MEDIUM or HIGH. Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

Photo Quality	
Quality	**Resolution in pixels**
LOW	640 x 480
MEDIUM	2048 x 1536
HIGH	2560 x 1920
VIDEO	640 x 480

MULTI-SHOTS?

Press + or – button to choose between three different settings: 1-SHOT, 2-SHOT or 3-SHOT. This indicates the number of shots taken at the end of each timelapse delay interval. Press the SELECT button to make selection. This setting does not affect Video. Press the RIGHT (▷) button to choose next setting.

DAILY WAKEUP

Press + or – button to choose between 25 different settings: any hour from 1AM to MIDNIGHT, and special setting called "BY LIGHT." This determines what time the camera will wake up each day and begin its timelapse program. The BY LIGHT option will wake the camera up as soon as there is enough light to take an image (this time will vary each day). Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

DAILY SLEEP

Press + or – button to choose between 24 different settings: any hour of the day from 1AM to MIDNIGHT. This determines the time each day that the camera will go to sleep. (Note: There is no "BY LIGHT" option to prevent inclement weather from temporarily turning off the camera in the middle of the day.) Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

Notes about DAILY WAKEUP & SLEEP

- If wakeup and sleep times are set to same setting (eg - 8am), the timelapse program will run all 24 hours.
- If daily awake time is the same or shorter than the interval, camera will take images only one time. (eg - WAKEUP: 8am and SLEEP: 11am so "awake" time is 3 hours. INTERVAL is set to 3 hour, 6 hour, or DAILY)

IMPRINT INFO?

Press + or - button to choose between YES and NO. Select YES to imprint the time lapse interval, camera name, date and time on the bottom of your photos. Note: if YES is selected while camera is programmed to take VIDEO, the camera will take a photo with imprinted info before each video clip. Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

DATE/TIME

Press the SELECT button and the month will flash. Press + or – button to select the proper month, then press the SELECT button again to make selection. Repeat until date and time are set. Press the RIGHT (▷) button to choose next setting. Note: The default date is 01/01/99 12:00am.

CAMERA NAME

Press the SELECT button, the selection will flash. Press + or – button to choose the first character: "0"-"9", "-", " " (space) or "A"-"Z". Press the SELECT button again to make selection and proceed. Repeat process until camera name has been set. Press the RIGHT (▷) button to choose next setting. Note: The default name is "PLANTCAM".

CONVERT TO VIDEO

This feature allows you to "stitch" multiple photos (up to 360) into a video clip. This allows you to show the passage of time greatly accelerated. Press the SELECT button to select the start picture. NOTE: Press the minus (–) button when setting the right-most digit from "0001", and the number will set to the last photo available to be stitched. Press + button to increase or – button to decrease the digit. Then press the SELECT button to confirm and proceed to the next digit. Repeat the above steps until four digits are set.

Press the SELECT button to select the end picture. Press + button to increase or – button to decrease the digit. Then press the SELECT button to confirm and proceed to the next digit. Repeat the above steps until four digits are set. Press the SELECT button to start conversion.

Note: Maximum 360 images for 1 video clip. To convert more photos, adjust video speed, add music, or for more control over the timelapse video, use video editing software on your computer. We recommend Windows Movie Maker (Microsoft) or iMovie (Apple).

Note: this function only works with photos that are stored on an SD memory card. It will not convert photos stored on the internal memory. It will not work if other video files are stored on the camera's internal memory or on an SD card.

TV OUT REGION

Press + or – button to choose betweens NTSC (North American) and PAL (European) standards for the TV OUT port. Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

ERASE IMAGES?

Press + or – button to choose betweens YES and NO. If choose YES, all images are erased. If SD card is installed, this will erase the card memory. If no SD card is installed, the camera's internal memory will be erased. **Note: all erased images cannot be restored, make a backup if needed.** Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

UPGRADE FIRMWARE

Press + or – button to choose between YES and NO. Choose YES to upgrade the firmware through a SD-card. Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting. Firmware updates will be available periodically at www.wingscapes.com. To determine which firmware version is installed on your camera, set dial to PLAYBACK and hold select button while turning camera ON.

RESET TO DEFAULT SETUP?

Press + or – button to choose betweens YES and NO. Choose YES to reset the camera to the default settings. Press the SELECT button to make selection. Press the RIGHT (▷) button to choose next setting.

Default Settings	
TIME LAPSE INTERVAL:	1 HOUR
PHOTO OR VIDEO:	Photo
PHOTO QUALITY:	Med 2048x1536
MULTI-SHOTS?:	1-Shot
DAILY WAKEUP:	Midnight
DAILY SLEEP:	Midnight
IMPRINT INFO:	Yes
DATE/TIME:	01/01/99 12:00am
CAMERA NAME:	PLANTCAM
TV OUT Region:	NTSC

7. MEMORY STORAGE and CAPACITY

Your digital camera has two types of memory capacity.

1. Internal memory.
2. Optional SD memory card.

Memory Chart*		
Resolution	**Picture count stored at 16MB Internal Memory**	**Picture count stored with 2GB SD Card**
LOW 640 x 480	100	7,500
MEDIUM 2048 x1536	15	2,400
HIGH 2560 x 1920	10	1,500
VIDEO 640 x 480	1	133

Estimates. Actual capacity will vary based on image properties.

IMPORTANT NOTES ABOUT SD MEMORY CARDS:

a. Always turn the unit off when inserting or removing an SD card to avoid damage and ensure that the camera properly updates the memory information.

b. When an SD card is inserted, any photos stored in the camera's internal memory become inaccessible, but are not lost. When the SD card is removed, images in the internal memory become accessible again.

c. Number of pictures or videos stored is determined by the card capacity with a maximum of 7,600 files.

8. IMAGE VIEWING by TV Out cable or USB Out cable

TV VIEWING

Move the rotary dial to PLAYBACK position. Connect unit TV OUT port to a VIDEO-IN jack on your TV. Press + or – button to scroll through recorded images. Press the RIGHT (▷) button to play a video clip. Press the LEFT (◁) button to delete pictures or video clip.

DELETE PHOTO

In the PLAYBACK mode, Press the LEFT (◁) button, then the selection will flash. Press the + button to choose YES, erase the selected image or – button to choose NO, return back to the previous screen. Press the SELECT button again to make selection.

USB VIEWING

To connect the camera to a Computer, the camera must be ON and the rotary dial in the SETUP position. Connect the USB cable between the USB OUT port and your computer. Your computer will recognize the new device automatically. Wait until the computer finishes installing the driver.

Double click on the My computer icon on your desktop (or Finder in Mac OS). You will see a new icon named "TL_PLANTCAM". Double click the icon and select the folder "DCIM" and then "100_WSPC", all your images will be stored in this folder. When the USB cable is disconnected the camera will go back to SETUP mode.

9. LASER AIM

This is a manual function and batteries must be loaded to operate the laser. There is no need to switch the camera ON.

To aim the laser open the camera door. Turn the rotary dial to the LASER AIM position. The laser is now activated. There will not be a LCD readout after the laser is turned ON. A red beam will appear. The red dot indicates the target area. Aim your camera accordingly.

CAUTION: The laser is hazardous to the eyes. Do not look into beam or aim at other people.

10. SPECIFICATIONS

Operational Modes:	AUTO – Automatic Timelapse operation SETUP – Customize menu settings LASER – activated laser aim PLAYBACK – output images on TV
Video:	(640 x 480) 10 seconds AVI clips
Picture Resolution:	LOW (640 x 480) / MEDIUM (2048 x 1536) / HIGH (2560 x 1920) (see MEMORY CHART on page 20)
Built-in Memory:	16MB
Format:	JPEG-Still pictures, AVI-Video clips
External SD Memory:	Up to 16 GB SDHC
Image Output:	TV OUT, USB OUT, SD Card
USB Output:	Requires PC with Windows 2000/ME/XP/Vista
Power Supply:	Standard or rechargeable 4 AA cell batteries. Note: Lithium batteries will offer extended battery life. Camera may also be powered by Wingscapes external power accessories (9V - 12V DC 250mA).

11. ADDITIONAL INFORMATION

The following information relates to the camera's laser aiming device.

Class II Laser Product
Wavelength: 650 nm
Maximum Output: < 1 mW

This product complies with the applicable requirements of 21 CFR 1040.10 and 1040.11

Caution: Looking into the laser beam may be hazardous to the eyes. Do not stare into the beam or direct it toward other people.

Caution: Use of controls or adjustments or performance of procedures other than those specified herein, may result in hazardous radiation exposure.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product label can be found near the battery compartment.

WINGSCAPES
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www.wingscapes.com
1-888-811-WING (9464)

Model Number:
WSCA04 – 00106

Serial Number:

Sold by Wingscapes, a division of PRADCO Outdoor Brands. Manufactured by Global Point Products.

No user serviceable parts inside.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product complies with applicable requirements of 21 CFR 1040.10 and 1040.11.

This yellow, laser-warning label can be found inside the door, on the face of the camera.

IMPORTANT:
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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